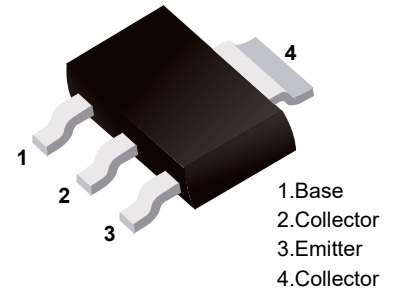


■ NPN Transistors



■ Simplified outline(SOT-223)

■ Features

- For AF driver and output stages
- High collector current
- Low collector-emitter saturation voltage
- Complementary to BCP51,BCP52,BCP53

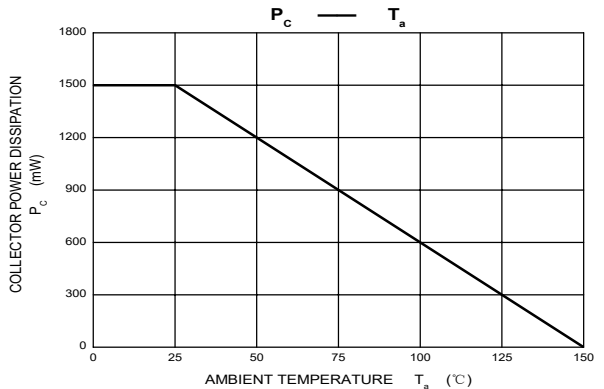
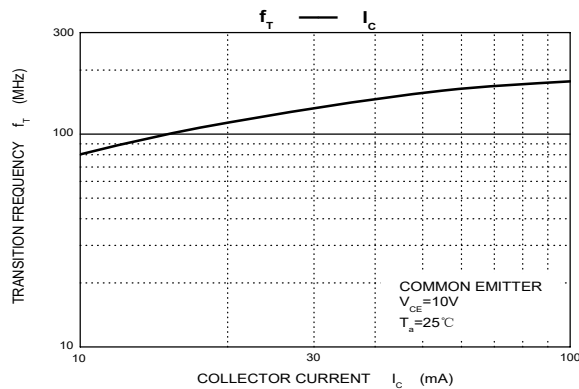
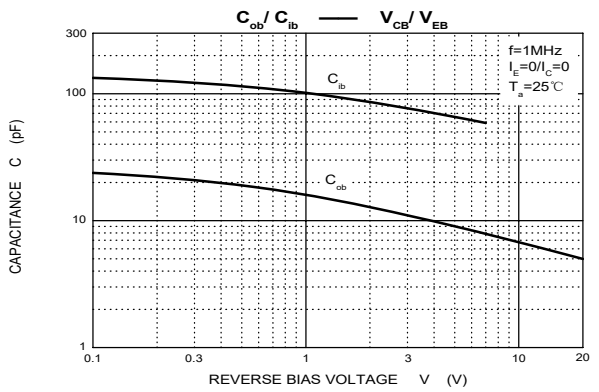
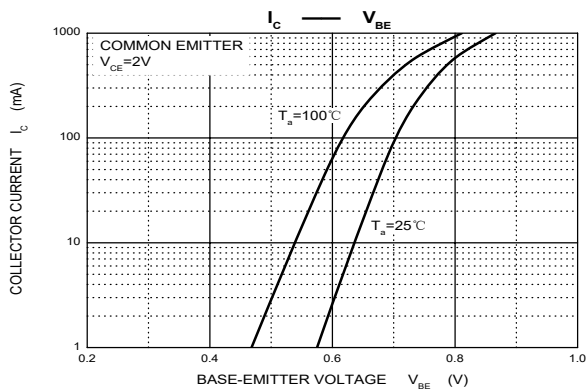
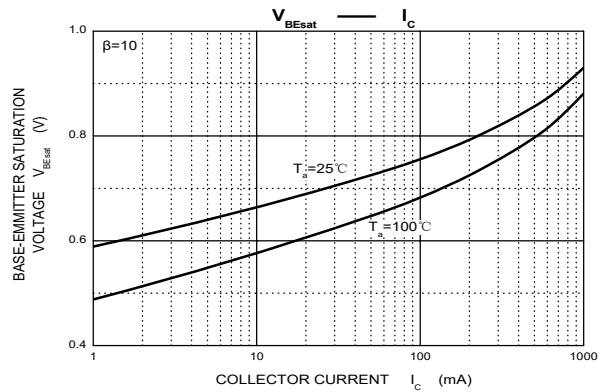
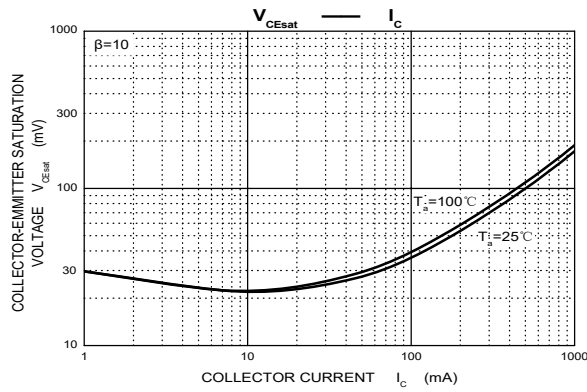
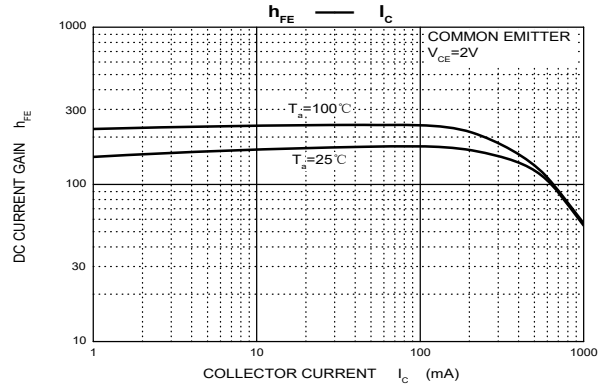
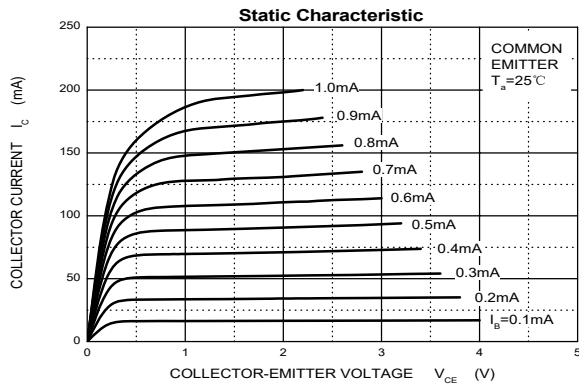
■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	BCP54	BCP55	BCP56	Unit
Collector - Base Voltage	V <sub>CBO</sub>	45	60	100	V
Collector - Emitter Voltage	V <sub>CEO</sub>	45	60	80	
Emitter - Base Voltage	V <sub>EBO</sub>	5			
Collector Current - Continuous	I <sub>c</sub>	1			A
Collector Power Dissipation	P <sub>c</sub>	1.5			W
Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	83.3			°C/W
Junction Temperature	T <sub>J</sub>	150			°C
Storage Temperature Range	T <sub>stg</sub>	-65 to 150			

■ Electrical Characteristics Ta = 25°C

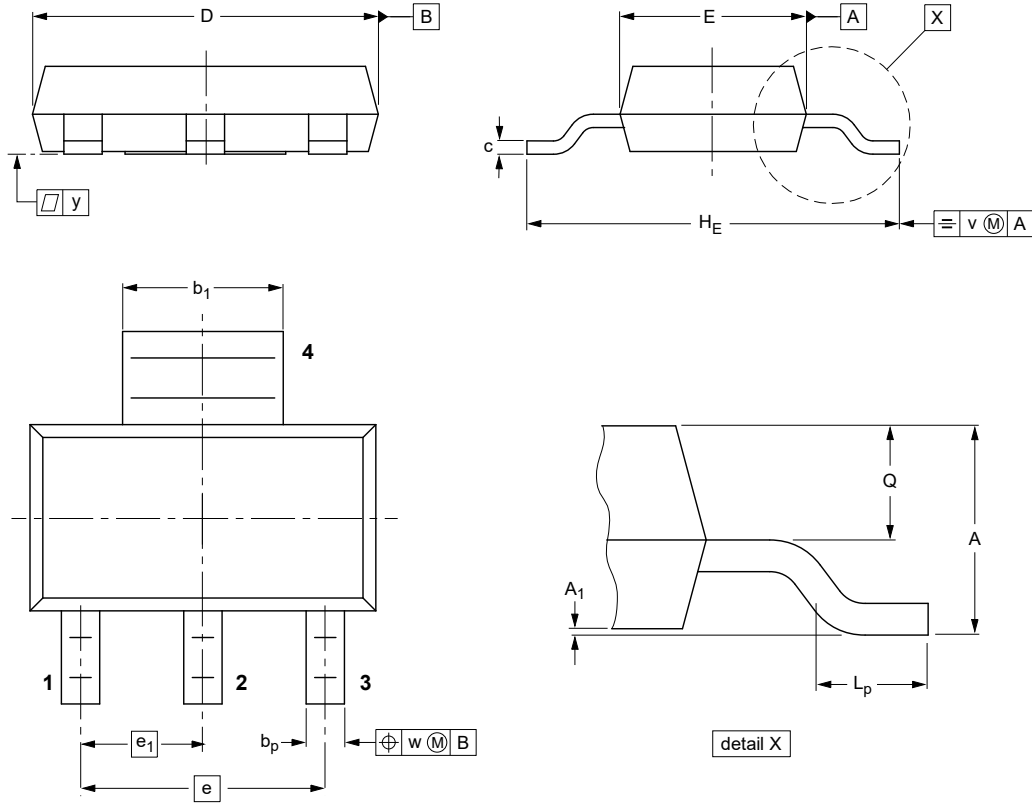
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Collector- base breakdown voltage	BCP54	$I_C = 100 \mu A, I_E = 0$	45			V	
	BCP55		60				
	BCP56		100				
Collector- emitter breakdown voltage	BCP54	$I_C = 10 mA, I_B = 0$	45			V	
	BCP55		60				
	BCP56		80				
Emitter - base breakdown voltage	$V_{EBO}$	$I_E = 100 \mu A, I_C = 0$	5				
Collector-base cut-off current	BCP54	$I_{CBO}$	$V_{CB} = 45 V, I_E = 0$			0.1	uA
	BCP55		$V_{CB} = 60 V, I_E = 0$				
	BCP56		$V_{CB} = 100 V, I_E = 0$				
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$			0.1		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500 mA, I_B = 50mA$			0.5		
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500 mA, I_B = 50mA$			1.2	V	
Base-emitter voltage	$V_{BE}$	$V_{CE} = 2V, I_C = 500mA$			1		
DC current gain	$h_{FE(1)}$	$V_{CE} = 2V, I_C = 5mA$	25				
	$h_{FE(2)}$	$V_{CE} = 2V, I_C = 150mA$	63		250		
	$h_{FE(3)}$	$V_{CE} = 2V, I_C = 500mA$	25				
Transition frequency	$f_T$	$V_{CE} = 10V, I_C = 50mA, f = 100MHz$	100			MHz	

■ Typical Characteristics



Package Outline

SOT-223



- 1.GND/ADJ
- 2.Output
- 3.Input
- 4.Output

DIMENSIONS (mm are the original dimensions)

UNIT	A	A <sub>1</sub>	b <sub>p</sub>	b <sub>1</sub>	c	D	E	e	e <sub>1</sub>	H <sub>E</sub>	L <sub>p</sub>	Q	v	w	y
mm	1.8 1.5	0.10 0.01	0.80 0.60	3.1 2.9	0.32 0.22	6.7 6.3	3.7 3.3	4.6	2.3	7.3 6.7	1.1 0.7	0.95 0.85	0.2	0.1	0.1

Summary of Packing Options

Package	Package Description	Packing Quantity	Industry Standard
SOT-223	Tape/Reel,13"reel	1000	EIA-481-1